DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Casey, William
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-028217
Date Inspected: 20-Aug-2012

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 700
OSM Departure Time: 1930
Location: Job site

CWI Name: Salvador Merino

Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**CWI Present:**	☑ Yes	☐ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☐ Yes	☑ No	☐ N/A
				Approved WPS:	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: OBG

Summary of Items Observed:

Quality Assurance Inspector (QAI) Rodney Patterson was at the American Bridge/Fluor (ABF) job site at Yerba Buena Island in California between the times noted above in order to monitor Quality Control functions and the in process work being performed by ABF personnel. The following items were observed:

The QA inspector periodically observed ABF/JV qualified welder Xiao Hua Luo #1291 performing Shielded Metal Arc Welding (SMAW)for repair in the 2G position. The repairs were performed in way of locations rejected during final ultrasonic testing performed by the ABF QC technicians. The repair welding was performed on the floor beam web splice at panel point 121.5 external to segment 13 East. The weld is designated as 13E-PP121. 5-E2.0.

Magnetic Particle Testing (OBG 13W)
This QA Inspector performed 100% verification Magnetic Particle Testing (MT) of the deck panel drop-in internal web/flange connections. This QA observed no rejectable indications at the time of testing, however the welds were initially rejected visually and minor repair by grinding was performed prior to acceptance. This QA Inspector generated a TL-6028 MT report on this date. The following welds were tested;

K-Plate Extension Stiffener splice- Weld-13W-EK-S2 (weld access hole required grinding)

Longitudinal Deck stiffener splice- Weld-13W-PP120.6-LS2

Floor Beam Flange Splice- Weld-13W-PP121-W2.4-BF1 (weld access hole required grinding)

Floor Beam Web Splice- Weld-13W-PP121-W2.4-BW1

Ultrasonic Testing (OBG 13W)

This QA performed verification Ultrasonic Testing (UT) on Complete Joint Penetration (CJP) deck panel drop-in internal web/flange connections for lift 13W. The welds were previously tested and accepted by QC Ultrasonic technicians in accordance with AWS D1.5-2002, section 6, table 6.3. The QAI's findings are as follows;

Lift 13W Longitudinal Diaphragm Stiffener Splice (Weld No. 14W-PP122.65-RSA)
The QAI performed a minimum of 10% random verification of this weld. No rejectable indications were observed at the time of inspection.

Lift 13W Longitudinal Diaphragm Stiffener Splice (Weld No. 14W-PP122.65-RSB)
The QAI performed a minimum of 10% random verification of this weld. No rejectable indications were observed at the time of inspection.

Lift 13W floor beam web splice (Weld No. 13W-PP121-W2.4-BW1)
The QAI performed a minimum of 10% random verification of this weld. No rejectable indications were observed at the time of inspection.

Lift 13W floor beam flange splice (Weld No. 13W-PP121-W2.4-BF1)
The QAI performed a minimum of 10% random verification of this weld. No rejectable indications were observed at the time of inspection.

The QAI observed ABF/JV qualified welder Wai Kitlai #2953 performing Carbon Arc Gouging (CAG) for the repair of the deck panel drop-in splices designated as 13E-E2.1 and 13E-E2.2. The ABF/JV QC inspector Salvador Merino was observed performing magnetic particle testing (MT) in way of the repair excavations at the following locations,

Weld 13E-E2.1
Y=8780 Depth 8, Width 50mm, Length 35mm
Y=7110 Depth 11, Width 30mm, Length 90mm

Weld 13E-E2.2
Y=550 Depth 8, Width 50mm, Length 100mm

The ABF welder Wai Kitlai was observed later in the shift performing Shielded Metal Arc Welding (SMAW) in the 4G position utilizing the Caltrans approved Welding Procedure Specifications ABF-WPS-D1.5-1004-Repair at the locations previously noted. The weld and surrounding area was brought to a temperature of 325ºF by the use of inductions heaters and maintained throughout the welding process. Due to the first time repair at Y=1080 for weld 13E-E2.8 and Y=8780 for weld 13E-E2.1 approval for repair (RWR) of this weld was not required. The repairs at Y=4830 for weld 13E-PP122.2 were performed in accordance with approval for repair document RWR201208-051 due to the fourth time repair at this location.

OBG 13E Deck Drop-in (13E-E2.1 and 13E-E2.2)

This QA randomly observed ABF/JV QC inspector Harry Scharein performing Ultrasonic Testing (UT) of the deck panel drop-in longitudinal weld splice designated as 13E-E2.1 and 13E-E2.2. The locations Ultrasonically tested were in way of repairs performed and completed more than 24 hours prior. The following locations were tested;

13E-E2.1
Y=6925 No rejectable indications observed.
Y=6060 No rejectable indications observed.
Y=5420 No rejectable indications observed
Y=5140 No rejectable indications observed

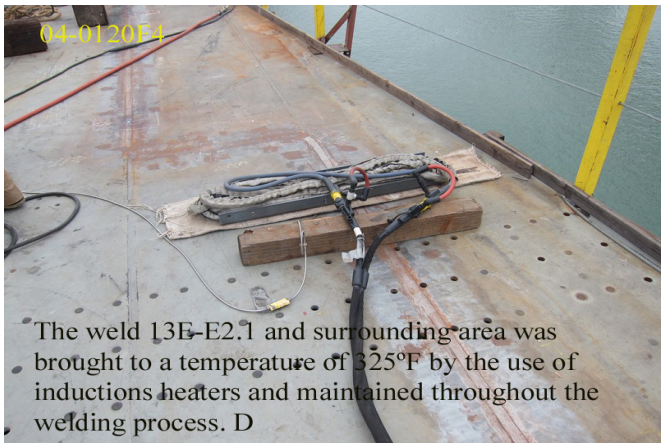
13E-E2.2
Y=3790 Rejected.
Y=3000 No rejectable indications observed
Y=550 No rejectable indications observed

The QAI spent a portion of this shift reviewing and documenting the status and completion of various production welding tracking logs for lift 13E-14E drop-in deck work currently in-process. The QA recorded the information on the OBG tracking log.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

Summary of Conversations:

As noted above



The weld 13E-E2.1 and surrounding area was brought to a temperature of 325ºF by the use of inductions heaters and maintained throughout the welding process. D

ABF/JV QC inspector Harry Scharein performing Ultrasonic Testing (UT) of the deck panel drop-in longitudinal weld splice designated as 13E-E2.1 and 13E-E2.2.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

WELDING INSPECTION REPORT

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Inspected By:	Patterson,Rodney	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer